UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/910,929	07/24/2001	Herve Le Floch	1807.1619	3572

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EXAMINER
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ART UNIT	PAPER NUMBER
2137	

DATE MAILED: 01/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with th correspond nc address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**.　　　2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-26_ is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-26_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _24 July 2001_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☒ All　b)☐ Some * c)☐ None of:

　　　1.☒ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
　　Paper No(s)/Mail Date _20011024_.

4)☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

U.S. Patent and Trademark Office
PTOL-326 (Rev. 1-04)　　　　　　　　Office Action Summary　　　　　　　Part of Paper No./Mail Date 1

Remarks

Claims 1-26 are pending.

Specification

1.   The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR
    DEVELOPMENT.
(d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A
    COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer
    program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)),
    and tables having more than 50 pages of text are permitted to be
    submitted on compact discs.) or
    REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a).
    "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
(e) BACKGROUND OF THE INVENTION.
    (1) Field of the Invention.
    (2) Description of Related Art including information disclosed under 37
    CFR 1.97 and 1.98.
(f) BRIEF SUMMARY OF THE INVENTION.
(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
(h) DETAILED DESCRIPTION OF THE INVENTION.
(i) CLAIM OR CLAIMS (commencing on a separate sheet).
(j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
(k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A
    "Sequence Listing" is required on paper if the application discloses a
    nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if
    the required "Sequence Listing" is not submitted as an electronic
    document on compact disc).

2.   The disclosure is objected to because of the following informalities:

-    Page 12, line 6 states "looping round" and should be "looping around".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3.   Claims 4, 5, 11, 12, 17, 18, 23, and 26 are rejected under 35 U.S.C. 102(b) as

being anticipated by Cox et al. (U.S. Patent 5,915,027).

Regarding Claim 11,

A device for extracting a message from digital data representative

of physical quantities, the message including ordered symbols,

comprising:

Means for segmenting the data into regions (Column 5, line 67-

Column 6, line 3);

Means for extracting a length of the inserted message (Column 9,

lines 37-45); and

Means for extracting the inserted message (Column 6, lines 6-14).

Regarding Claim 4,

Claim 4 is a method claim that is substantially equivalent to system

claim 11. Therefore, claim 4 is rejected under a similar rationale.

Regarding Claim 17,

Claim 17 is an apparatus claim that is substantially equivalent to

method claim 4. Therefore, claim 17 is rejected under a similar rationale.

Regarding Claim 23,

Claim 23 is a storage medium containing a computer-readable

program claim that is substantially equivalent to method claim 4.

Therefore, claim 23 is rejected under a similar rationale.

Regarding Claim 26,

Claim 26 is a storage medium containing a computer-readable

program claim that is substantially equivalent to method claim 4.

Therefore, claim 26 is rejected under a similar rationale.

Regarding Claim 18,

Claim 18 is an apparatus claim that is substantially equivalent to

system claim 11. Therefore, claim 18 is rejected under a similar rationale.

Regarding Claim 12,

A device according to claim 11, wherein the means for extracting

the length of the inserted message includes:

Means for selecting a set of length values (Column 9, lines 39-40),

Means for calculating a correlation value between the message and

the digital data, for each of the length values (Column 9, lines 37-39), and

Means for determining a local maximum from among the correlation

values (Column 9, lines 39-40).

Regarding Claim 5,

Claim 5 is a method claim that is substantially equivalent to system

claim 12. Therefore, claim 5 is rejected under a similar rationale.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1, 3, 8, 10, 17, 18, 19, and 22 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Cox et al. (U.S. Patent 5,915,027) in view of Moskowitz et al.

(U.S. Patent 5,889,868).

Regarding Claim 8,

A device for inserting a message into digital data representative of

physical quantities, the message including ordered symbols, comprising:

Means for segmenting the data into regions (Column 4, line 66 to

Column 5, line 1);

Means for associating at least one region with each symbol to be inserted (Column 5, lines 1-9),

Means for modulating the symbol in question by a previously determined pseudo-random function in order to supply a pseudo-random sequence (Column 4, lines 55-60).

Means for adding the pseudo-random sequence to a region in question (Column 5, lines 1-9).

Cox et al. do not disclose how to generate the pseudo-random sequence for use in modulation.

Moskowitz et al., however, disclose means for determining a pseudo-random function for each region from a key which depends on an initial key and on a length of the message (Column 7, lines 29-39). This new system would be the system of Cox et al. generating a pseudo-random function, as in Moskowitz et al.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to use the technique for generating a pseudo-random function from Moskowitz in order to provide for better tracking of who owns the digital data. One of ordinary skill in the art would have been motivated to do so in order to provide higher levels of protection of copyrights, ownership, etc.

Regarding Claim 1,

Claim 1 is a method claim that is substantially equivalent to system

claim 8. Therefore, claim 1 is rejected under a similar rationale.

Regarding Claim 17,

Claim 17 is an apparatus claim that is substantially equivalent to

method claim 1. Therefore, claim 17 is rejected under a similar rationale.

Regarding Claim 18,

Claim 18 is an apparatus claim that is substantially equivalent to

system claim 8. Therefore, claim 18 is rejected under a similar rationale.

Regarding Claim 19,

Claim 19 is a storage medium containing a computer-readable

program claim that is substantially equivalent to method claim 1.

Therefore, claim 19 is rejected under a similar rationale.

Regarding Claim 22,

Claim 22 is a storage medium containing a computer-readable

program claim that is substantially equivalent to method claim 1.

Therefore, claim 22 is rejected under a similar rationale.

Regarding Claim 10,

Cox et al. disclose a device according to claim 8 or 9, further

comprising means for prior transformation of the digital data by a

reversible transformation (Column 4, lines 55-60).

Regarding Claim 3,

Claim 3 is a method claim that is substantially equivalent to system

claim 10. Therefore, claim 3 is rejected under a similar rationale.

5.   Claims 2 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Cox et al. (U.S. Patent 5,915,027) in view of Moskowitz et al. (U.S. Patent 5,889,868),

further in view of Sandford et al. (U.S. Patent 5,727,092).

Regarding Claim 9,

The system from above discloses that the key is dependent upon

the length of the message and an initial key, but not any ordering of the

symbols.

Sandford et al., however, disclose the following:

A number of times the symbol to be inserted has already been

inserted into other regions (Column 6, lines 53-65), and

A ranking of the symbol among the ordered symbols (Column 6,

lines 53-65).

This new system would be the system from above ordering the

symbols being inserted as in Sandford et al.

It would have been obvious to one of ordinary skill in the art at the

time of applicant's invention to use the sorting technique of Sandford et al.

in the system from above in order to allow for less insertion. One of

ordinary skill in the art would have been motivated to do so in order to

minimize the amount of symbols that need to be inserted into the data.

Regarding Claim 2,

Claim 2 is a method claim that is substantially equivalent to system claim 9. Therefore, claim 2 is rejected under a similar rationale.

6.   Claims 6, 7, 13, and 14 are rejected under 35 U.S.C. 102(b) as being unpatentable over Cox et al. (U.S. Patent 5,915,027) in view of Tanaka (Japanese Application Number 2000-82211). U.S. Patent Application Publication 2001 0026616, by Tanaka, is being used as evidence for that which is disclosed within 2000-82211, by the same inventor.

Regarding Claim 13,

Cox et al. do not disclose the processing of fewer than all coefficients.

Tanaka, however, discloses means for extracting the length of the inserted message is configured to perform extraction while processing F times fewer coefficients than included in the digital data (Detailed Description, Paragraph 121). This new system would be the system of Cox et al. processing fewer than all coefficients at the time of extraction.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to process fewer than all coefficients because the proper watermark can be detected with a smaller number of coefficients. One of ordinary skill in the art would have been motivated to do so in order to allow for the detection of the watermark to halt when it is

determined to be the proper watermark (Detailed Description, Paragraph

123).

Regarding Claim 6,

Claim 6 is a method claim that is substantially equivalent to system

claim 13. Therefore, claim 6 is rejected under a similar rationale.

Regarding Claim 14,

Cox et al. do not disclose the processing of fewer than all

coefficients.

Tanaka, however, discloses the following:

Means for determining a total number of coefficients to be

considered (Detailed Description, Paragraph 121);

Means for selecting a maximum number of coefficients

corresponding to a same inserted symbol (Detailed Description,

Paragraph 118); and

Means for reiterating processing of the means for selecting, for

another symbol, if the total number of coefficients to be considered has

not been reached (Detailed Description, Paragraph 120).

This new system would be the system or Cox et al. processing

fewer than all coefficients at the time of extraction.

It would have been obvious to one of ordinary skill in the art at the

time of applicant's invention to process fewer than all coefficients because

the proper watermark can be detected with a smaller number of

coefficients. One of ordinary skill in the art would have been motivated to do so in order to allow for the detection of the watermark to halt when it is determined to be the proper watermark.

Regarding Claim 7,

Claim 7 is a method claim that is substantially equivalent to system claim 14. Therefore, claim 7 is rejected under a similar rationale.

7. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cox et al. (U.S. Patent 5,915,027) in view of Moskowitz et al. (U.S. Patent 5,889,868), further in view of Kunimoto et al. (U.S. Patent 5,303,236).

The system from above does not disclose the setup of the computer system running the program from above.

Kunimoto et al., however, disclose a system comprising:

A microprocessor (Column 9, line 52);

A read-only memory including a program for processing the data (Column 9, lines 53-54), and

A random-access memory including registers suitable for recording variables modified during running of the program (Column 9, lines 54-55).

This new system would be the system from above running on Kunimoto et al.'s computer system.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention that this is a normal setup for a computer system. One of

ordinary skill in the art would have been motivated to use this computer system in order to use a widely known and available computer system for the program from above.

8.   Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cox et al. (U.S. Patent 5,915,027) in view of Kunimoto et al. (U.S. Patent 5,303,236).

The system from above does not disclose the setup of the computer system running the program from above.

Kunimoto et al., however, disclose a system comprising:

A microprocessor (Column 9, line 52);

A read-only memory including a program for processing the data (Column 9, lines 53-54), and

A random-access memory including registers suitable for recording variables modified during running of the program (Column 9, lines 54-55).

This new system would be the system from above running on Kunimoto et al.'s computer system.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention that this is a normal setup for a computer system. One of ordinary skill in the art would have been motivated to use this computer system in order to use a widely known and available computer system for the program from above.

9.   Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Cox et al. (U.S. Patent 5,915,027) in view of Moskowitz et al. (U.S. Patent

5,889,868), further in view of Mahe (U.S. Patent 6,459,685).

Regarding Claim 20,

The system from above does not disclose the use of a detachably

mountable storage medium.

Mahe, however, discloses the use of a detachably mountable

storage medium that holds a computer-readable program that is mounted

on a device for encoding data (Column 8, lines 1-6). This new system

would be the system from above storing the computer-readable program

code on a detachably mountable storage medium.

It would have been obvious to one of ordinary skill in the art at the

time of applicant's invention to store the computer-readable program on a

detachably mountable storage medium in order to provide portability. One

of ordinary skill in the art would have been motivated to do so in order to

obtain the properties of a detachably mountable storage medium, since

the very nature of a detachably mountable storage medium, such as a

CD-ROM, is that it is portable and easily switched for another.

Regarding Claim 21,

The system from above does not disclose exactly what the

detachably mountable storage medium is.

Mahe, however, discloses that the detachably mountable storage

medium is a floppy disk or a CD-ROM (Column 8, lines 1-6). This new

system would be the system from above storing the computer-readable

program code on a detachably mountable storage medium.

It would have been obvious to one of ordinary skill in the art at the

time of applicant's invention to store the computer-readable program on a

floppy disk or CD-ROM order to provide portability, while using a medium

that is well known and widely used. One of ordinary skill in the art would

have been motivated to do so in order to obtain the properties of a floppy

disk or CD-ROM, since the very nature of a these detachably mountable

storage mediums is that they are portable, easily switched for another,

well known, and widely used.

10.   Claims 24 and 25 are rejected under 35 U.S.C. 102(b) as being unpatentable

over Cox et al. (U.S. Patent 5,915,027) in view of Mahe (U.S. Patent 6,459,685).

Regarding Claim 24,

The system from above does not disclose the use of a detachably

mountable storage medium.

Mahe, however, discloses the use of a detachably mountable

storage medium that holds a computer-readable program that is mounted

on a device for encoding data (Column 8, lines 1-6). This new system

would be the system from above storing the computer-readable program

code on a detachably mountable storage medium.

It would have been obvious to one of ordinary skill in the art at the

time of applicant's invention to store the computer-readable program on a

detachably mountable storage medium in order to provide portability. One

of ordinary skill in the art would have been motivated to do so in order to

obtain the properties of a detachably mountable storage medium, since

the very nature of a detachably mountable storage medium, such as a

CD-ROM, is that it is portable and easily switched for another.

Regarding Claim 25,

The system from above does not disclose exactly what the

detachably mountable storage medium is.

Mahe, however, discloses that the detachably mountable storage

medium is a floppy disk or a CD-ROM (Column 8, lines 1-6). This new

system would be the system from above storing the computer-readable

program code on a detachably mountable storage medium.

It would have been obvious to one of ordinary skill in the art at the

time of applicant's invention to store the computer-readable program on a

floppy disk or CD-ROM order to provide portability, while using a medium

that is well known and widely used. One of ordinary skill in the art would

have been motivated to do so in order to obtain the properties of a floppy

disk or CD-ROM, since the very nature of a these detachably mountable

storage mediums is that they are portable, easily switched for another,

well known, and widely used.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Jeffrey D. Popham whose telephone number is (571)-

272-7215. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Andrew Caldwell can be reached on (571)-272-3868. The fax phone

number for the organization where this application or proceeding is assigned is 703-

872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

ANDREW CALDWELL
SUPERVISORY PATENT EXAMINER